

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to FIGS. 1-3. Please see the Remarks section for further explanation of these changes.

Attachment: Replacement sheets (FIGS. 1-3)
Annotated sheet showing changes (FIGS. 1-3)

REMARKS

This document is a response to the Office Action mailed October 24, 2008.

The drawings stand objected to under 37 CFR 1.84(l) because the reference characters and some lines in the context of the drawings, particularly in Figs. 2 and 3, are not uniformly thick and well-defined. The drawings also stand objected to under 37 CFR 1.83(a) because they fail to show the separating means of claim 37.

Claims 20, 25, and 26 stand rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent 4,472,962 to Mennenga ("Mennenga"). Claims 21-24 and 27-28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mennenga. Claims 29-39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,561,240 to Ochiai ("Ochiai"), in view of Mennenga.

Objections

In response to the Examiner's comments regarding lines and characters not uniformly thick or well-defined, replacement sheets for corrected Figs. 1, 2 and 3 are provided. The lines and characters have been made uniform and more well-defined. Furthermore, corrections have been made with respect to reference numerals 9, 10, and 16 in accordance with the use of the reference numerals in the detailed description.

In response to the Examiner's objection regarding the separating means, claim 37 has been canceled.

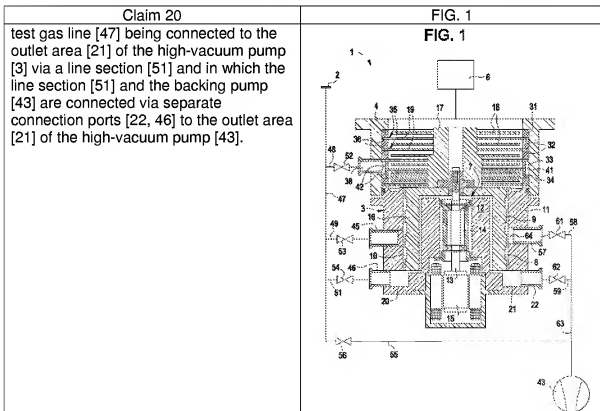
35 U.S.C. §102(b) Rejections

Independent claim 20 and dependent claims 25 and 26 stand rejected under 35 U.S.C. 102(b) as being anticipated by Mennenga. According to the Federal Circuit, "[a patent] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *SRI Int'l, Inc. v. Internet Security Sys., Inc.*, 511 F.3d 1186, 1192 (Fed. Cir. 2008) (citing *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987)); see also

MPEP §2131 ("to anticipate a claim, the reference must teach every element of the claim.") Because Mennenga does not expressly or inherently teach every element found in the rejected claims, Applicant respectfully disagrees with the rejection.

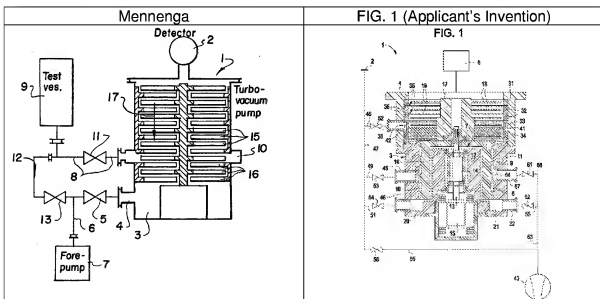
As explained in the specification, the Applicant's invention is directed to reducing the response time for counterflow leak detection. See, e.g., paragraph [0004] of the published application. By reference to revised FIG. 1 of the Applicant's invention, the leak detector [1] of pending claim 20 accomplishes this reduction in response time using the following inventive combination of elements:

- (i) the outlet area [21] of the high-vacuum pump [3] having separate connection ports [22, 46];
- (ii) a first connection port [22] connected to the backing pump [43]; and
- (iii) a second connection port [46] connected to the test gas line [47] via line section [51].



Referring to paragraph [0021] of the published application, because of this unique arrangement, "[a]lmost the entire quantity of gas flowing in the test gas line, in the instance of a closed valve 56 . . . flows through the forevacuum chamber 21 expediently designed by way of an annular channel. The test gas contained in the flowing gas thereby passes more rapidly and at higher concentration compared to the state-of-the-art into the forevacuum chamber [i.e., outlet area [21]] of the high-vacuum pump and thus also more rapidly towards the test gas detector 6." In this manner, gross leak detection response time (i.e., the time elapsing from the moment test gas enters the inlet of the leak detector to the moment test gas is recorded) is reduced. Neither Mennenga, nor any of the other cited references contain the above-described novel combination of elements to reduce response time.

As shown in the side-by-side comparison of revised FIG. 1 of the Applicant's invention and the figure from Mennenga, while the outlet area [21] of the high-vacuum pump [3] of the Applicant's invention has separate connection ports [22, 46], Mennenga teaches an outlet area [3] of the high-vacuum pump [1] with only a single connection port [4] (i.e., Mennenga does not disclose an outlet area with separate connection ports).



As is clearly evident from the figure from Mennenga above, Examiner's reliance on element [10] of Mennenga as being a separate connection port to the outlet area [3] (OA at p. 3) is misplaced for a variety of reasons. First, element [10] is described by Mennenga and shown in the figure as an "annular channel" (Mennenga at 3:13-15) and not a connection port. And even if element [10] were a connection port, which it is not, it is not connected to the outlet area [3], but instead is connected to the inlet area. Accordingly, in Mennenga, all test gas enters the vacuum pump through the unlabeled inlet connection port (connected to line [8]) and must then pass through the pump area, and not directly through the outlet area [3] below the pump area. As such, Mennenga neither discloses the mechanical setup of the Applicant's invention, nor reduces the response time in the manner of the Applicant's invention. And since Mennenga does not disclose an outlet area with separate connection ports, Mennenga obviously also fails to disclose the Applicant's invention's second connection port [46] connected to the test gas line [47] via line section [51] to increase the response time of leak detection.

Furthermore, the Applicant's invention's addition of a second connection port [46] to the outlet area [21] connected to the test gas line [47] to the prior art system disclosed in Mennenga would not be obvious, as evidenced by the long felt but unsolved need to reduce response time in leak detectors. There has been a continuing need to reduce response time in leak detectors since Mennenga issued over two decades ago in 1984. In the period since then, despite the continuing need to reduce response time in leak detectors, nobody else has added the second connection port to the outlet area as claimed. Such evidence of long felt but unsolved need would rebut any finding of obviousness. *Graham v. John Deere Co.*, 383 U.S. 1 (US 1966).

The Examiner also rejected dependent claims 21-24 and 27-28 under 35 U.S.C. 103(a) as being unpatentable over Mennenga. According to the Examiner, Mennenga discloses all the limitations of claims 21-24 and 27-28 except "two separate connection ports connected to an outlet chamber and two additional gas inlets on the TMP." The Examiner views the limitation as "a mere duplication of parts in view of the connection ports 4 and 10 connected to an outlet chamber and the additional gas inlet disclosed by Mennenga."

Respectfully, the Applicant disagrees. According to *In re Harza*, as cited by the Examiner, mere duplication of parts has no patentable significance unless a new and unexpected result is produced. 274 F.2d 669 (CCPA 1960). As explained above, the two connection ports (as opposed to just one) connected to the outlet chamber produce a new and unexpected result, namely, a quicker response time. A quicker response time has been highly desirable and continues to be highly desirable. Furthermore, the two additional gas inlets located on the TMP allow different sensitivities of leak detection. A different and highly useful result is achieved by the addition of each of these two inlets. Lastly, nowhere does Mennenga teach an additional gas inlet. Mennenga teaches only one inlet, as depicted by the unlabeled inlet connected to line [8] and annular channel [10]. No additional inlet is disclosed.

Because Mennenga does not anticipate or render obvious independent claim 20, Applicant respectfully submits that claim 20 and other pending claims that depend from claim 20 (i.e., claims 21-36 and 38-39) are neither anticipated nor rendered obvious. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious."). Accordingly, Applicant requests that the rejections to all pending claims be withdrawn.

With respect to the claim rejections argued by the applicant herein *supra*, the applicant's selective treatment and emphasis of certain claims in the application should not be taken as an indication that the applicant believes the Examiner's unaddressed dependent claim rejections are otherwise sufficient. Applicant expressly reserves the right to present arguments traversing the propriety of the dependent claim rejections later in the prosecution of this or another application.

Further with respect to the claim rejections argued by the applicant herein *supra*, while the applicant herein may have highlighted a particular claim element of a claim for purposes of demonstrating insufficiency of the examination on the part of the Examiner, the applicant's highlighting of a particular claim element for such purpose should not be taken to indicate that the applicant has asserted an argument in support of patentability that a particular claim element constitutes the sole basis for patentability out of the

context of the various combinations of elements of the claim or claims in which it is present. The applicant maintains the right here forward to assert that each claim is patentable by reason of any patentable combination recited therein.

Accordingly, in view of the above remarks, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0289, under Order No. 327_104 from which the undersigned is authorized to draw.

Dated: January 22, 2009

Respectfully submitted,

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